1. A sensor for detecting biological molecules, said sensor comprising:

a substrate;

an electrode on said substrate, said electrode having the capacity to bind a preselected biological molecule, said electrode [being between about 10^{-9} and 10^{-10} meters in height] extending from a principal surface of said substrate a distance of from 2 Angstroms to 5 nanometers and said electrode having a width of from 2 Angstroms to 5 nanometers.

2. The sensor recited in claim 1, wherein said [electrode is] substrate has a plurality of said electrodes.

4. The sensor recited in claim 2, wherein at least one of said electrodes has a chemical composition which is different than [the other] another of said electrodes.

8. The sensor recited in claim 6, wherein at least one of said coatings is different than [the other] another of said coatings.

9. The sensor recited in claim 2, wherein the [height of] plurality of said electrodes extend from a principal surface of said substrate and wherein at least one of said electrodes [is different that the height of the other] extends farther from said principal surface than another of said electrodes.

10. The sensor recited in claim 2, wherein the width of at least one of said electrodes is [different that] greater than the width[s] of [said other] another of said electrodes.

22. A sensor system for detecting biological molecules, said sensor system comprising:

a substrate;

a micro cantilever [array] on said substrate;

at least one electrode disposed on [at least one of] said micro [cantilevers] cantilever.

23. The sensor system recited in claim 22, further comprising a laser for determining the concentration of biological molecules bound to said electrode.

24. The sensor system recited in claim 23, further comprising a piezoelectric detector for detecting the concentration of biological molecules bound to said electrode.

25. A method of sequencing nucleic acids, comprising the steps of:

providing a sensor assembly, said sensor assembly having a substrate on which plurality of electrodes are disposed, said electrodes each [being between about 10^{-9} and 10^{-10} meters in height and width] extending from a principal surface of said substrate a distance of from 2 Angstroms to 5 nanometers and having a width of from 2 Angstroms to 5 nanometers;

contacting said electrodes with a solution containing nucleic acids;

said electrodes having the capacity to bind at least some of said nucleic acids.

~~26~~ 27. The method recited in claim ~~25~~ 23, wherein said sensor assembly includes a microtube in which said electrodes are disposed.

~~27~~ 28. The method recited in claim ~~26~~ 27, wherein said sensor assembly further [comprising] comprises a flow control system and a laser detector.

~~28~~ 29. The method recited in claim ~~25~~ 23, wherein said sensor assembly further [comprising] comprises a microcontroller and a display.

~~31~~ 1 31. The [method] sensor recited in claim 2, further comprising a support structure for said substrate, said support structure being adapted to be received in a x-y fluorescent laser reader.

32. A silicon chip to detect individual proteins comprising at least one surface region sensor manufactured with Angstrom level precision [where the] wherein said surface region [of the] sensor complements exactly the three dimensional shape of a [given] protein.